

Maximizing Energy Efficiency Investments Through Communication Campaigns: How to Make Reddy Kilowatt® the Moral Equivalent of Smokey the Bear

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A fundamental objective of most energy efficiency programs is to change consumer attitudes and/or behavior. The most successful programs depend on costly financial incentives, and require intensive technical assistance and direct marketing. While these "cost push" strategies for accelerating the penetration of efficient technologies have short term benefits, without continued subsidies, consumers will likely revert to previous habits, and may learn to expect rebates.

The authors believe that a national communication campaign, which complements utility demand-side management (DSM) programs and other efficiency efforts, must be developed to sustain short term behavioral changes (such as purchasing and installing efficient devices) and to permanently change the attitude (energy consciousness) of the customer.

This paper will discuss strategies for developing national and regional communication campaigns, and it will present:

- (1) A justification for the need to explore the ability of an energy efficiency social marketing campaign to improve the effectiveness of present programs.
- (2) A description of market barriers that can be overcome through an orchestrated social marketing approach.
- (3) The elements and framework for building a successful campaign.
- (4) The theory that the intrinsic social value of efficient energy use can be utilized through communications to change attitudes and move those with favorable attitudes to take desired actions.

Introduction

Most energy efficiency programs strive to change consumer attitudes and/or behavior. But do they effect long term change? The most successful utility programs depend on financial incentives and require intensive technical assistance and direct marketing. The danger here is that the subsidies being offered may be creating an artificial market without promoting energy consciousness. Large subsidies alone can also lead to customers undervaluing the products received through efficiency programs, creating barriers to proper operation and acceptance of these products.

Why promote energy consciousness? Because in the long run, it leads to a more efficient market and because the public wants it. As Secretary of Energy, Admiral Watkins traveled across the country to gain public input for

developing a national energy strategy, he reported that: "The loudest single message was to increase energy efficiency in every sector of energy use. Energy efficiency was seen as a way to reduce pollution, reduce dependence on imports, and reduce the cost of energy."

In addition, industry supports the value of efficient energy use. Thomas Kuhn, President of Edison Electric Institute, has said that the "long history of energy use is a history of progress from primitive, wasteful forms of energy to more effective, more efficient forms of energy. Which brings me to the subject of efficiency; that is energy and efficiency. Like love and marriage, it's a good combination. Learning to use energy more efficiently lets us use other resources more efficiently, as well."

To meet the public's goals, there is going to have to be a comprehensive message that appeals to a broad based audience, which includes: political leaders; equipment manufacturers, distributors, and vendors; residential, commercial, and industry energy consumers; and advocates. To develop a successful program, there has to be a strong interaction between all the players.

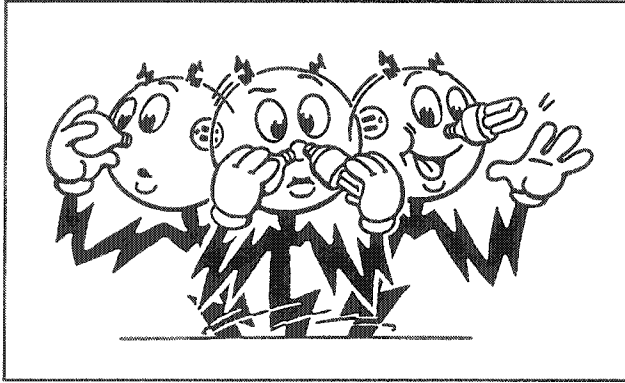


Figure 1. Reddy Kilowatt® Changes to a Compact Fluorescent Nose¹

We need to articulate what energy efficiency means to the consumer in simple terms; we need to tell consumers what they can do; and we need to make it easy for them to do what is needed. This approach is modelled after a number of social marketing (Kotler and Eduardo 1989) campaigns that have been waged successfully in the United States and abroad for over 50 years. Smokey the Bear is an example of a campaign that works.

Fires were destroying the nation's forests, and the federal government had a choice. It could rely solely on hiring more rangers to fight the fires or it could educate the public about the consequences of their actions, and in a positive way, teach them how to use their natural resources safely. Remember the slogan -- "only you can prevent forest fires." You -- the consumer -- were empowered to make a difference.

The campaign worked -- and is still working -- because it helps people see the connection between their individual actions and a possible result from the action. Nobody wants to be responsible for burning forests.

The recycling campaign is another excellent model. Within a very short time, it has succeeded in institutionalizing its message. It's symbol, the triangular set of arrows signifying the slogan, "reduce, reuse, recycle," is printed on boxes and containers -- it is not only identifiable to consumers, customers ask store managers to stock recyclables. As a matter of fact, consumer demand

created the market for smaller detergent boxes and weekly pickups of separated trash. While recycling, no doubt, is good for the environment, it also provides secondary benefits to the economy. It has resulted in considerable growth in the waste management industry, which saw the consumer's social conscience as a potentially marketable product. There is reason to believe that energy efficiency can be just as acceptable to the consumer, and as profitable for the manufacturers, distributor, and utility.

And ultimately nobody wants to be responsible for wasting energy. Obviously, the public wants to save money. But that isn't all. People also want to protect the environment; reduce reliance on imported fuels; create jobs; improve US competitiveness; and preserve finite resources. However, if they don't see the connection between using energy wisely and its benefits, they will not be able to understand the results of their actions.

In short, what is needed is a comprehensive, consistent, and pervasive message that moves people to the point where they are predisposed to participate in an energy efficiency program.

What Is Social Marketing?

A social change campaign is an organized effort conducted by one group (the change agent), which intends to persuade others (the target adopters) to accept, modify, or abandon certain ideas, attitudes, practices, and behavior (Kotler and Eduardo 1989).

These campaigns use mass media, sales promotion, personal selling, public relations, and publicity to deliver the message. In the past several years, national campaigns such as "Buckle up for safety," "Say no to drugs," and "Don't drink and drive" were developed to change the population's behavior. These changes often occurred by targeting a subgroup of likely adopters or innovators who influenced others to follow their lead.

To induce action, it is necessary to convert information to knowledge to a change in attitudes and finally to behavioral change. Granted, attitudinal change does not necessarily result in action. However, research has confirmed the positive relationship between social influences through communication and action. "Contemporary policies designed to promote conservation have virtually ignored the fact that energy consumption almost always takes place in a social matrix and that the social forces generated by these situations exert considerable influence on behavior" (Katev and Johnson 1987). Social-psychological research shows that energy related attitudes alone are not enough for people to act (Stern and Aronson 1983).

However, the concept of building upon present experiences with information and financial incentive programs to develop an integrated social marketing effort which manages social forces should be of interest to energy industry professionals.

Why is now the time to use social marketing techniques to help the energy efficiency resource achieve its potential? Given that: utility energy efficiency programs have been relatively successful; environmental protection is considered a core value within the general population; and government, and to some degree manufacturers and business, have institutionalized energy efficiency; the public is ready to receive the message. The relative success of various energy efficiency efforts nationally which give the consumer the opportunity to participate in a program indicate that wise energy use could become a social norm. However, a communications campaign is needed to distribute this message reliably and with accurate expectations of the results of individual actions.

The Key to a Successful Marketing Campaign

Several factors have been documented by sociologists which favor the successful implementation of change campaigns. What follows is a description of the conditions associated with successful campaigns and their applications to energy efficiency (Kotler and Eduardo 1989).

- (1) Monopolization -- The lack of contrary public opinion. Most everyone agrees that energy efficiency is a wise personal and national goal. No one is going to say it is smart to waste energy.
- (2) Canalization -- Building on pre-existing notions or attitudes. A significant portion of the population is predisposed towards valuing resource efficiency. This segment can help convey the social marketing message.
- (3) Supplementation -- Bringing the campaign face-to-face with the target audience. Utility field representatives are already providing technical assistance and direct marketing and are prepared to supplement a national campaign.
- (4) Channeling -- Delivering the goods to the market. Products and services must be readily available and at a reasonable price for this campaign to work.
- (5) Universality -- Every individual uses energy and could use it more efficiently. Utilization of mass marketing then becomes cost effective.

When the foundation is there, and all the elements are in place, a social marketing campaign has a high probability of success.

Barriers to Overcome

Cost is presently treated as the primary barrier to the acceptance of efficient equipment. Much has been written about the "payback gap," which is a measure of the customer's unwillingness to buy an energy efficient product with a long payback period compared to his indirect acceptance of payment for energy usage through rate increases toward building new power plants. The primary solution to overcoming this barrier is believed to be larger utility rebates of up to 100% of the cost of the technology (Moskovitz, Nadel, and Geller 1991).

Achieving high levels of energy efficiency requires significant investments by the various stakeholders, particularly utilities. However, leading efficiency advocates have not included national communications as an important investment component. Little has been written about the potential for social marketing to work in conjunction with existing programs to encourage customers to participate in programs without increasingly higher incentives.

Spending to achieve high levels of efficiency has been estimated to increase to nearly 15% per year in electric utility expenditures alone, growing to 33 billion dollars per year by 2010. (Hirst 1991) This figure excludes customer and government expenditures among others. It also could mean continuously higher rebate levels with no end in sight, because the consumer has not been trained to ask for the energy efficient device absent a direct financial incentive. For example, if a free compact fluorescent light bulb fails, the customer will likely replace it with the incandescent if she is not offered another one.

With large financial incentives, utilities are overcoming a long list of obstacles with one basic tool: money. While other obstacles are often cited as being important, the seemingly endless pool of resources (using power plant equivalency costs) understates social marketing opportunities. By communicating energy efficiency's various attributes including: convenience, economy, control, risk reduction, reliability, etc., the value of energy efficiency services helps to increase the customer's allowable payback period thus more properly aligning customer benefits with costs.

With such a large sum of money at stake, it is reasonable to explore the opportunities for marshalling financial resources to create a sustainable demand for energy efficient products and services in the marketplace. This

can be done by communicating a national efficiency message which unites various efficiency efforts such as improved building codes, the development of appliance standards, financial incentive programs, regional and local education programs and energy services pricing options.

Defining the Energy Efficiency "Product"

Adoption of new ideas and new behaviors is the goal of social marketing. Ideas and behaviors are the product to be marketed. The energy efficiency social product is a complex combination of social ideas, social practices and tangible objects.

The energy efficiency social idea is composed of beliefs, attitudes and values. The energy efficiency belief (a descriptive thought) to be marketed could be "energy should be used wisely." Attitudes (enduring favorable or unfavorable cognitive evaluations, emotional feelings, and action tendencies toward some object or idea) such as "it is my duty to future generations to use scarce natural resources efficiently." Values (overall ideas of what is right and wrong) to be marketed may be that environmental protection is intrinsically desirable and worthy.

The second type of social product is a social practice. An example of an energy efficient social practice to be marketed might be a single act such as turning off the lights when you leave the room.

The third type of social product is a tangible object such as a compact fluorescent light bulb or a variable speed drive motor. However, the object is more than just a product (this is the problem with present practices), it is also a tool to accomplish the social practice (Kotler and Eduardo 1989).

The energy efficiency product described above is obviously much different than a relatively simple educational strategy. Educational approaches such as "Use Energy Wisely" are abstract even when supported with reasons why and how a person should take such actions. Present examples include bill stuffers and brochures. Even if the message is successful in moving the target adopter through the stages in the innovation-decision process (knowledge, persuasion, decision, implementation, and confirmation) (Rogers 1983) with the help of personal selling, rebates and fulfillment processes, we can't assume that participant's attitudes and beliefs have changed. On the contrary, they may be conditioned to expect similar attention to take the desired action. Participants have not learned behavior but have taken an offer they couldn't refuse.

The energy efficiency change product also relies on technological breakthroughs or improvements. Change agents can substitute, modify, and introduce new technologies into the marketplace to attract target adopters. Promoting infrared drying of paints for automobile manufacturing is an example of this strategy, and it has brought a new energy efficient technology to the attention of the auto industry.

Regulatory and legislative options are another way to accomplish change. Examples such as energy efficiency codes, product efficiency standards, performance measurement protocols, regulations, rules, legislation, tax policies and import policies are all presently used to effect social change (Millhone 1992).

Thus, the social product unifies all of the above components into a cohesive theme that the customer can understand.

Identifying and Understanding Target Adopters

Marketing campaigns are aimed at one or more groups of target adopters or innovators. Based on a variety of public opinion studies such as EEI's Public Opinion Reviews (Edison Electric Institute 1992) and EPRI's Customer Preference and Behavior (Lineweber 1990) project, we know that certain segments of the population have a predisposition towards resource conservation. These groups are definable by sociodemographic characteristics (age, geographic location, socioeconomic status), psychological profile (attitudes, values, motivation, personality) and behavioral characteristics (buying habits, preferences, decision-making characteristics). There is also a business equivalent known as firmographics (SIC category, size, building type, management style, sense of social responsibility).

Customers who are predisposed to taking an efficiency action are a relatively small portion of the population. However, the social marketing campaign is designed to move others into that category where the opportunity to take the efficient action is available through a program.

Managing Social Change

One of the first requirements of a successful energy efficiency campaign is to design a better product. What is available now is a set of disjointed messages and programs which do not necessarily complement each other. Utility programs (often competing gas and electric) use mass media which cover areas not served by the utility.

State and federal government efforts legislate higher building standards that are not enforced. Labels are stuck on appliances which customers can't understand and salesmen ignore. Utility programs give rebates for products which aren't available and which contractors don't know how to install. Manufacturers make products which over promise and under-deliver. These are just a few examples of the problems associated with well intentioned programs which confuse the customer and are detrimental to accomplishing what appears to be common goals. However, individual strategies, if carried out properly, are certainly valuable in their own right. The point is that successful piecemeal programs can become even more effective if they are part of an orchestrated social marketing approach.

The challenge to designing and implementing an energy efficiency change campaign is to develop a comprehensive set of messages which will be used by the change agents (an alliance of individuals or organizations that attempt to bring about a social change--in this case, all of the above). This will be difficult given the contentiousness and conflicting secondary goals of the parties. However, the rewards can be worth the effort if all of the potential change agents can be shown how their individual needs can be satisfied.

Diffusion of the Energy Efficiency Innovation

Opinion leaders or influential public figures are a key element in the diffusion of the social product. Opinion leaders in this case are the subsection of innovators who are well known and whose actions or comments will influence target adopters. Examples include top elected officials, state regulators, consumer advocates, business leaders, sports figures and actors and actresses.

Overcoming Psychological Barriers -- The Battle for the Mind

Consumers generally have the attitude toward consumption that more is better. Our society is based on economic growth and generally gains satisfaction by continually acquiring/consuming bigger and better products and services.

Most people's feeling about energy efficiency relates to going with less and/or sacrifice. Remember Jimmy Carter wearing a sweater and asking us to turn down the thermostat? This well intentioned call for emergency actions may have temporarily reduced energy use but defined energy efficiency as doing without. This mind-set created

an obstacle which is still in place nearly twenty years later. By re-defining through social marketing that energy efficiency is the wise use of our resources without sacrifice, this obstacle can be overcome.

Payback requirements by residential customers and businesses have been proven to be as much of a behavioral practice as they are a financial requirement. EPA's Green Lights program has been successful to a large extent because it has been able to convince the top managers of large corporations that they can afford to accept a lower return on their energy efficiency investment due to its relatively low risk thus redefining cost-effective as it relates to efficiency (U.S. Environmental Protection Agency 1992).

Energy efficient products themselves may create significant barriers to their adoption. These products must be superior in performance, reliability, durability and service or they will create a negative perception among target adopters. Following is an example of a product which works counter to social marketing goals.

The average 1991 technology compact fluorescent light bulb can take 1.5 seconds to come on and one minute to reach full brightness. It doesn't fit easily in most fixtures and costs \$15 dollars retail if you can find it on the shelf. Often it's performance has been oversold with claims that an 18 watt compact fluorescent is as bright as a 75 watt incandescent and that it will last 9000 hours. True, heavy subsidies have created an artificial market for the product, but is the customer happy? Are utilities treating their customers like power plants instead of people? "If initial conservation measures fail to produce significant results, consumers are likely to resist later innovations ever more." (Dennis 1990) The problem here is not the bulb which is fine for some applications but a marketing message which oversells the product.

Other examples include: an occupancy sensor that turns the lights out during a Board meeting; an absorption chiller that costs more to maintain than promised; a variable speed drive motor that wears out before its expected life; or a batch of defective electronic ballasts. These examples all create attitudes and beliefs which run counter to the purpose of energy efficiency social marketing objectives. Thus one of the most important marketing tools, word-of-mouth, will be detrimental to acceptance of the marketing message. People will perceive that all efficient products don't perform as expected and will share this information with their neighbors. Business associates will learn about hardware failures. Contractors will never specify products that are perceived as risky.

These examples all point out the problems associated with stimulating the market for energy efficient technologies without adequate planning. Change agents who rush the adoption of a technology without benefitting from the value of the introduction and growth stages of the product life-cycle risk hitting the market too early. As we witnessed in the solar industry of the late 1970's/early 1980's, large subsidies can lead to inadequate technology development, a weak support and maintenance infrastructure, and a consumer base which does not fully value the products once subsidies disappear. Technical, production, and distribution problems need to be worked out during the primary stages of the campaign (Levitt 1965). The public must be ready, the infrastructure in place, and quality products and services available to the consumer.

Developing the Social Product

The energy efficiency product is one that the target adopters don't perceive they need but addresses an implicit need of the people. It actually requires developing multiple, interrelated products. Without detailing the entire product mosaic, listed below are a few messages or themes that could comprise the whole:

- (1) Use Energy Efficiently--At a Profit
- (2) You Can Do Something For the Environment Every Time You Turn On a Light
- (3) Energy Efficiency Prevents Jobs From Moving Overseas

Attention should be paid to the sequence of the messages. The target adopter should be drawn through the process of awareness, knowledge, preference/belief and action/value.

Implementing a Social Marketing Campaign

As we have described, an energy efficiency social marketing campaign could substantially advance the awareness of the benefits of efficient energy use, and provide solid support for additional initiatives such as utility DSM programs, energy standards and codes, and other economic incentives for efficient use of energy. In this section, we propose a hypothetical structure for implementing a national communications campaign.

As discussed earlier, the campaign must reach the people who will eventually move the market. Initially, more attention should be paid to target adopters who are likely to be either (1) more easily influenced than others, and/or (2) more likely to become advocates for the campaign's causes. Targeted campaigns, with various levels of

sophistication and different media methods would be used to reach these select markets. Local communications will be supported by state and national messages.

Getting Started

To establish a nationally organized social marketing project for energy efficiency, a national organization is needed to plan and implement the undertaking. This could be executed through an existing organization (such as the Department of Energy, the Environmental Protection Agency, the Edison Electric Institute, or the Association of Demand-Side Management Professionals), or through a newly formed entity supported by key organizations.

The national organization would carefully plan the campaign structure. Extensive market research would be required initially, both from primary and secondary sources. Baseline data on attitudes towards energy efficiency would be collected, as well as information on buying patterns. Information from existing national and regional surveys such as EPRI's Classify (TM) program would furnish valuable information on customer preferences and needs with regard to energy. This early market research would also provide a baseline for evaluation of the impact of the social marketing campaigns.

Test Marketing

To determine the effectiveness of various communications strategies, test marketing cases (or pilot programs) would be developed. Each central concept for linking a social need to energy efficiency (e.g. local environment, global environment, job creation, and economic savings) would have several themes developed. These campaigns would then be taken to various small markets where they will be implemented and then evaluated. The most effective strategies will be selected for movement into regional or national markets.

Disseminating Information

While the national organization spearheads the marketing campaign, local groups will be used to reach the population more effectively. At a state level, state energy offices and offices of natural resources would be likely key groups for involvement. They would be able to reach certain market segments easily given their existing infrastructures. In addition, we believe that primary and secondary schools provide an excellent place to reach a very influential market. Students not only become the buyers of tomorrow, they also have a great deal of influence on the buying habits of their households. Students often have a

strong disposition towards a positive environmental message. By teaching students the strong link between energy and the environment through an expanded curriculum, young people will grow up with a more acute awareness about the value of energy efficiency.

Another obvious group to utilize the benefits of a national social marketing campaign is the utilities with their DSM programs. A social marketing campaign can provide a foundation from which the utilities can promote their specific programs and technologies. The national support would hopefully increase market penetration, improve persistence, lower the need for monetary assistance and close the gap between efficient attitudes and behavioral change.

A national campaign would not be inexpensive. However, if 1% of DSM expenditures were earmarked for a national campaign, that would provide approximately \$20 million per year. Of course, it would be necessary to evaluate the effectiveness of any expenditures on such a campaign. We believe that the social marketing campaign would be a cost-effective investment.

Unlike impact evaluations for rebate programs that lead to specific technology purchases, a communications campaign would not lead to "hardwired" impacts. However, the social marketing campaign's influence could be measured through changes in awareness of the key messages, and in changes in purchase behavior linked to understanding of the energy efficiency issues. Market research techniques can be used to estimate the impact of the campaign on energy and capacity.

Summary

The electric utility industry will spend billions of dollars on energy efficiency over the next few years. But will it get the most for its dollar? We believe that a comprehensive national marketing campaign incorporating a symbol like Reddy Kilowatt® could enhance industry programs and unify complimentary efforts by government, business and individuals. The campaign would urge people to act on their positive attitude toward energy efficiency by helping consumers visualize the impacts of their decisions. Since energy use has become virtually hidden from users, the campaign will provide vivid portrayals of the positive impacts of collective decisions to act effectively while minimizing waste, cost and unnecessary effort. This visualization will help narrow the gap between attitudes and actions and tap into the pent-up demand for energy efficient products and services. It would tie the psychological and social benefits of program participation to the traditional economic drivers by communicating the value

of energy resources. Absent such a campaign, utility energy investments may be limited to unsustained, incremental gains in efficiency while underestimating the ability to influence behavior through social-psychological methods.

Endnotes

1. Reddy Kilowatt® is a registered trademark and is used here with permission of Reddy Communications, Inc., Albuquerque, New Mexico.

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